injection of I, the content of Ca in the serum gradually increases, and then in the course of 2-3 weeks gradually falls. The content of inorganic phosphorus was low in almost all of the children (1.7-4 mg%) and during the introduction of I slowly returned to normal. An expressed correlation between the rate of complete recovery and the normalization of the phosphorus content in the blood was observed in only part of the children. The activity of the alkaline phosphatases in the sick children in comparison with healthy ones was higher; under the influence of the treatment, the characteristic course of the curve of the activity of the enzyme was established - a rise, with a subsequent slow fall to a norm, over 2 month. Aminoaciduria which was observed in children ill with rickets decreased with the introduction of I.

TOOKOS, Ildiko; TIEFENBACH, Laszlo

Chemical analysis of milk plant waste waters and some conclusions drawn from it. Elelm ipar 18 no.6:171-178 Je '64.

1. Scientific Research Institute of Water Resources Development (for Tookos). 2. Milk Industry Enterprise of Budapest and Vicinity (for Tiefenbach).

TIEGERMAN, T., dr.

Current status of the long-term anti-infective treatment of chronic pyelonephritis. Med. intern. (Bucur.) 17 no.1:25-33 Ja '65

1. Lucrare efectuata in Clinica medicala a Spitalului de adulti al Raionului "30 Decembrie", Bucuresti.

DIMITRIU, C. Gh., prof.; NESTOR, R., dr.; TIEGERMAN, T., dr.

Rheumatoid gout. Med. intern. (Bucur.) 16 no.6:641-648 Je '64

Renal functional exploration, a criterion for individualization of the treatment of rheumatoid arthritis. Ibid. 649-652

1. Lucrare efectuata in Clinica medicala a Spitalului de adulti al raionului 30 Decembrie (director: prof. C.Gh.Dimitriu).

[redacted]

Changes in kymo-insufflation curves following introduction of certain drugs in sterile females. Cesk. gyn. 24[38] no.9:690-694 Nov. 1959

1. Ustav pro vedi o matku a dite, Praha-Podoli, reditel doc. dr. M. Vojta.

(STERILITY, FEMALE, physiol.) (FALLOPIAN TUBES, pharmacol.)

1. M. A. TIELIENHA, Prof.

2. USSR (600)

4. Beet Pests - Smolensk District

7. Experience in extensive use of the biological method of combating the winter borer in Smolensk District Kiev Province. Visnyk AN URSR 23 no. 2. 1951.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

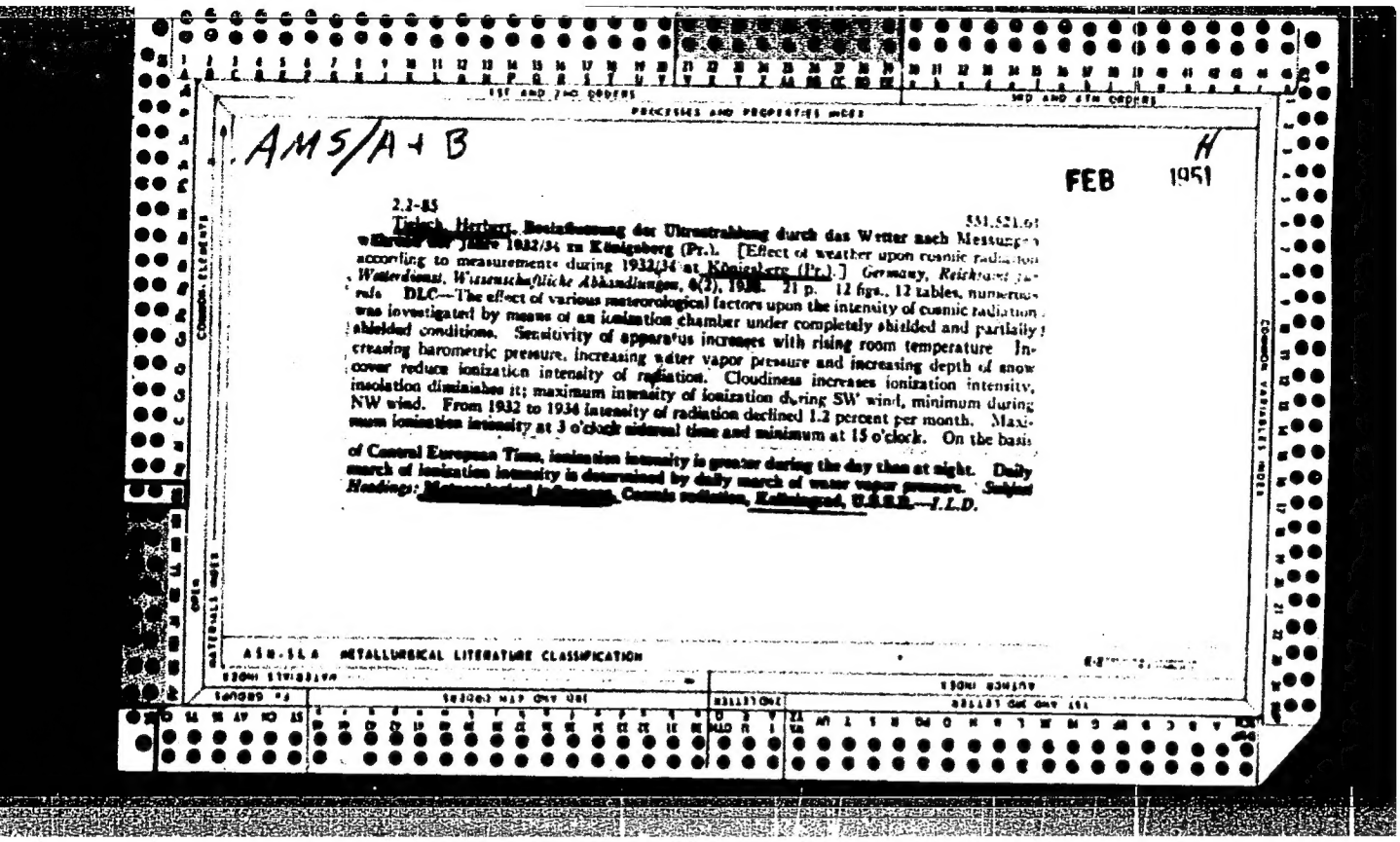
1. TIELIENKA M.A. Prof.

2. USSR (600)

4. Smolensk District-Beet Pests

7. Experience in extensive use of the biological method of combatting the winter borer in Smolensk District, Kiev Province, Visnyk AN SSR 23 no.2 1951

9. Monthly List of Russian Accessions, Library of Congress, April 1953, unclass.



AMS/A+B

H

FEB 1951

2.3-85

551.521.61

Tinloch, Herbert, Beeinflussung der Ultrastrahlung durch das Wetter nach Messungen während der Jahre 1932/34 zu Königsberg (Pr.). [Effect of weather upon cosmic radiation according to measurements during 1932/34 at Königsberg (Pr.).] *Germany, Reichsamt für Wetterdienst, Wissenschaftliche Abhandlungen*, 6(2), 1938. 21 p. 12 figs., 12 tables, numerous refs. DLC—The effect of various meteorological factors upon the intensity of cosmic radiation was investigated by means of an ionization chamber under completely shielded and partially shielded conditions. Sensitivity of apparatus increases with rising room temperature. Increasing barometric pressure, increasing water vapor pressure and increasing depth of snow cover reduce ionization intensity of radiation. Cloudiness increases ionization intensity, insolation diminishes it; maximum intensity of ionization during SW wind, minimum during NW wind. From 1932 to 1934 intensity of radiation declined 1.2 percent per month. Maximum ionization intensity at 3 o'clock sidereal time and minimum at 15 o'clock. On the basis of Central European Time, ionization intensity is greater during the day than at night. Daily march of ionization intensity is determined by daily march of water vapor pressure. *Subject Headings:* [redacted] Cosmic radiation, Kaliningrad, U.S.S.R.—*I.L.D.*

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

TIEMNIKOW, F. E., prof. dr [Temnikov, F. Ye.]

Technological information. Przegl elektrotechn 40 no. 2: 77 F '64.

1. Moskiewski, Instytut Energetyczny, Katedra Automatyki i Telemechaniki.

TIENDL, J.

3

Journal of Applied Chemistry
June 1954
Industrial Inorganic Chemistry

Metallography of tin, tin alloys, and tin coatings on steel. J. Tiendl (*Hutniché Listy*, 1954, 9, 95—98).—Methods of metallographic examination of Sn and Sn coatings on steel are reviewed. New technique in prep., polishing, and etching of specimens is described. S. K. LACHOWICZ.

TIEPŁOW, B.

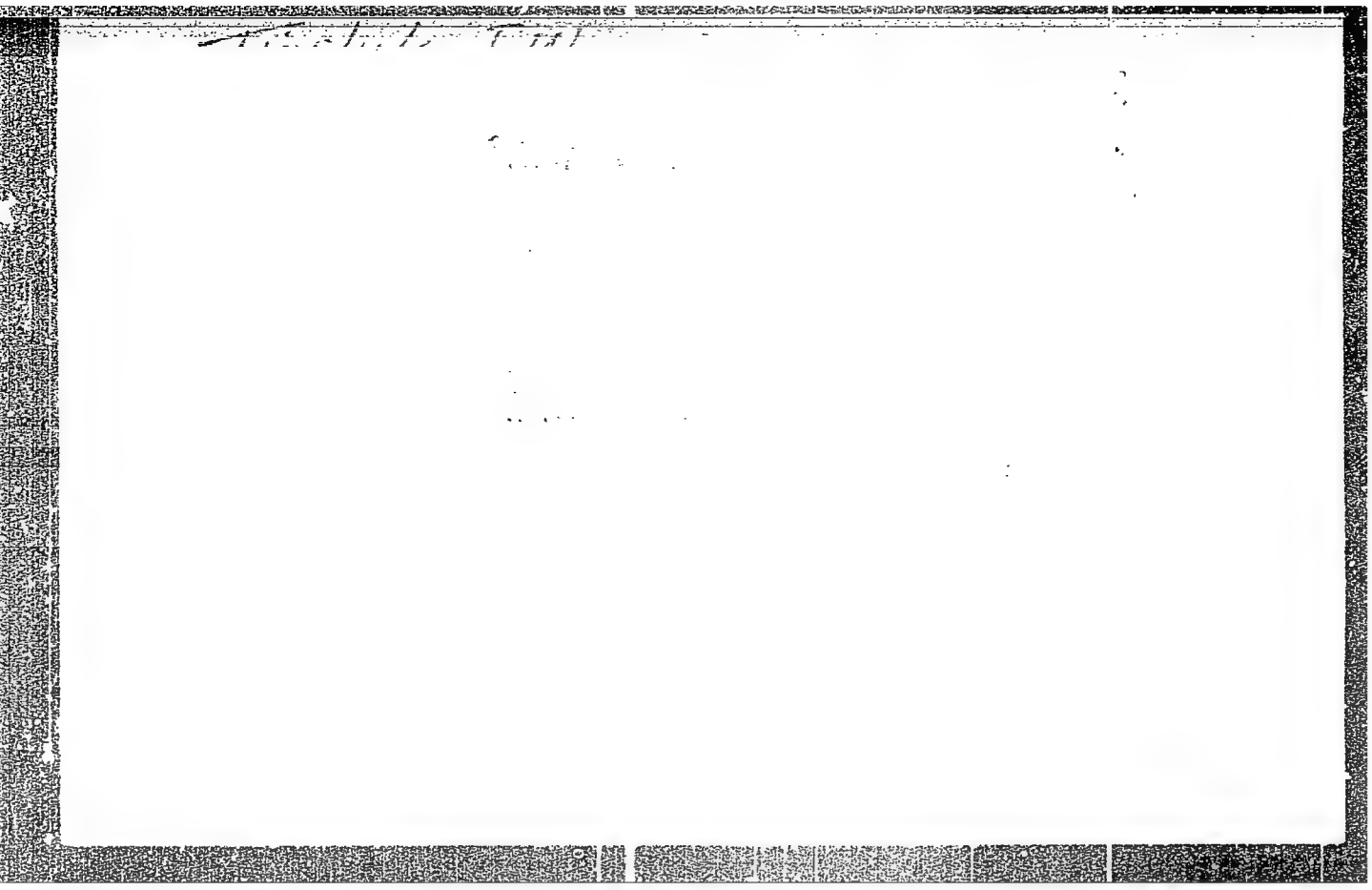
"Psychologia" (Psychology), by B. Tiepłow. Reported in New Books (Nowe Ksiazki), No. 14, July 15, 1955

TIERECHOW, W.

Under the banner of May Day. p. 161

Combustion locomotives on heavily loaded sections of railroad lines. p. 194 PRZEGLAD KOLEJOWY (Wydawntctwa Komunikacyjne) Warszawa. Vol. 7, no. 5, May 1955

SOURCE: East European Accessions List, (EEAL), Library of Congress, Vol. 4, no. 12, December 1955



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TIETEIU, O.

TECHNOLOGY

REVISTA CONSTRUCTILOR SI A MATERIALELOR DE CONSTRUCTII. Vol. 10, no. 9, Sept. 1958.

Influence of drying temperature on the properties of granular slag. p.601.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 5 ~~May~~ 1959, Unclass.

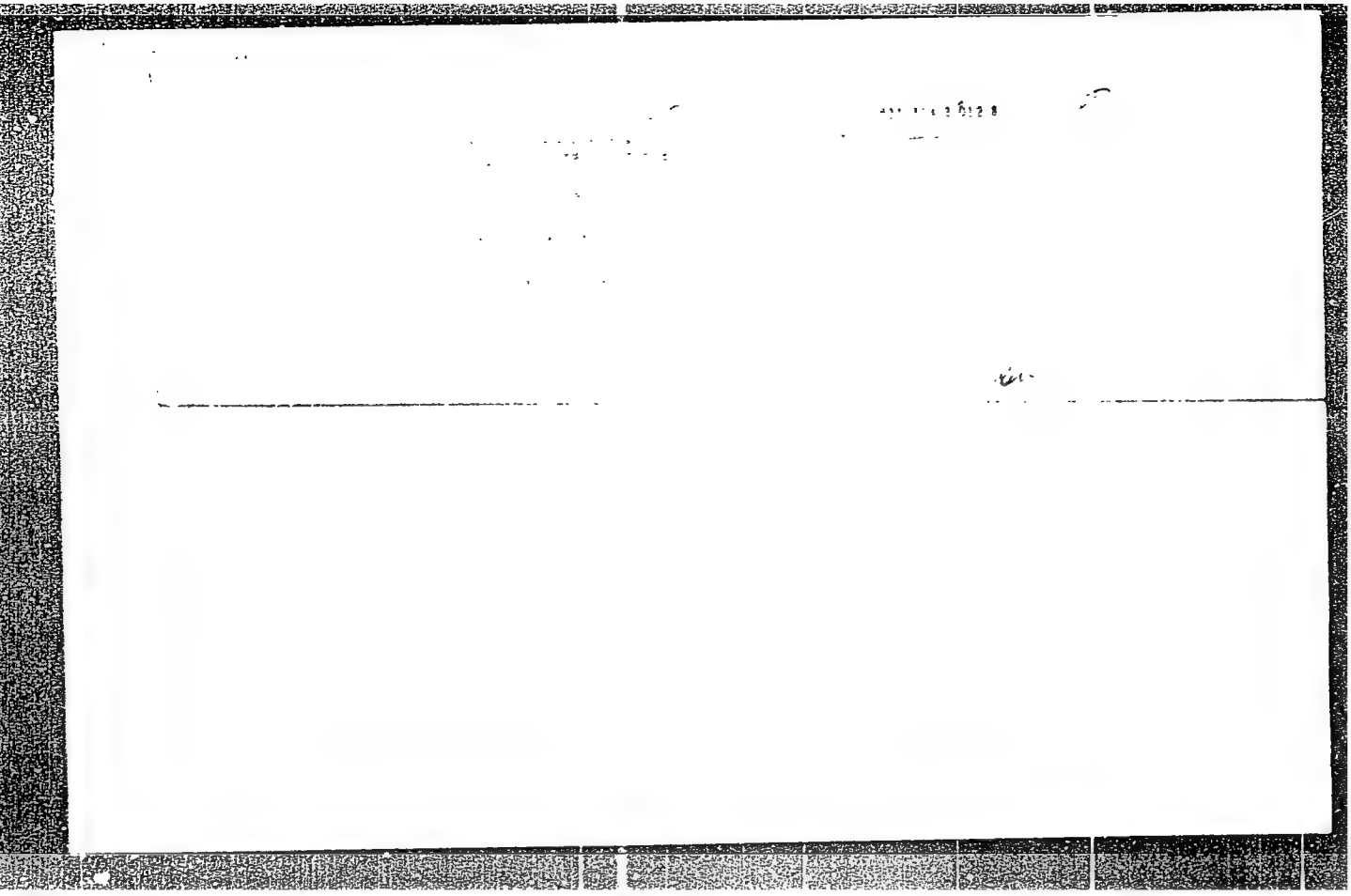
TIETIERUKOW, W.I., k.n.t.; GOLDSZTIEJN,L.I., inz.

A pump for active suspensions. Przegl mech 23 no. 21:625-627 10 N '64.

TIETZ, Artur, inz.; ZEMANEK, Jaroslav, inz.

Cold-pressure welding in replacing copper by aluminum. El tech obzor 52 no.4:181-187 Ap '63.

1. Statni vyzkumny ustav silnoproude elektrotechniky Bechovice (for Tietz). 2. Moravskoslezske elektrotechnicke zavody Postrelmov, n.p. (for Zemanek).



TIETZ, Artur, inz.

Properties of aluminum connections and their testing. El tech obzor 53 no. 1:43-44 Ja '64.

1. Statni vyzkumny ustav silnoproude elektrotechniky.

TIETZ, Artur, inz.

Connecting of aluminum in electrical engineering. Elektrotechnik 18 no.11:306-308 'N'63.

1. Statni vyzkumny ustav silnoproude elektrotechniky, Bechovice.

TIETZ, A.

TIETZ, A. Operational diagram of transformers. p.449

Vol. 45, no. 9, Sept. 1956
ELEKTROTECHNICKY OBZOR
TECHNOLOGY
Praha, Czechoslovak

So: East European Accession, Vol. 6, No. 2, 1957

[illegible]

The diagram is based [illegible] the electrical parameters of [illegible] [illegible] be represented [illegible] admittances [illegible] plotting the loci of [illegible] line losses, constant voltage ratio and constant tangent of the phase angle of a required or given output power. The diagram thus becomes independent of the operating voltage and is valid for any operating condition. The plotting of the diagram is simple, since it consists only of straight lines and circles, the centres of which are found by simple graphical interpolation. Theoretically the diagram is absolutely exact, apart from the system of the constant loss circles, in which [illegible] is deliberately introduced in order to avoid complicated constructions without appreciable improvement of the accuracy. In the equivalent π-type quadripole, the active resistances of the two transverse arms of the quadripole were neglected. This neglect is permissible for lines up to 400 km long. In any case, it produces an appreciable difference only in transmission conditions near to no-load operation.

B. K. KRAUS

L 45969-66 EWP(e)/EWP(c)/EWP(v)/T/EWP(k)/EWP(l) IJP(c) WW/WH

ACC NR: AP6017951 (A) SOURCE CODE: GE/0018/66/000/001/0040/0042

76
59
B

AUTHOR: Tietz, H. -D. (Graduate engineer, Doctor; Magdeburg)

ORG: DGMA, Magdeburg, GDR

TITLE: Report on the First Symposium on Nondestructive Testing in Yugoslavia(held in Opatija from 26 to 29 April 1965)

14

SOURCE: Feingerätetechnik, no. 1, 1966, 40-42

TOPIC TAGS: scientific conference, international conference, radiography, weld evaluation, ultrasonic inspection

ABSTRACT: Lectures presented at the 1st symposium on Nondestructive Testing, held in Opatija, Yugoslavia, between 26 and 29Apr65, are described briefly. D. Hourvat (Ljubljana) discussed problems in the standardization of industrial radiography; B. Valic (Slavonski Brod) wire and step-penetrometer testing; M. Pavicevic, F. Borelli, and D. Srdoc (Vinca) a pocket dosimeter for x-ray and γ-radiation; L. Bircanin and D. Nemoda (Vinca) the manufacture of radioactive radiation sources; L. Krunic and J. Kamhi (Zagreb) the evaluation of welds with x- and γ-rays; W. Benz (Hattingen, GDR) a 12-MeV electron linear accelerator for thick specimens; H. J. Kopineck and G. Sommerkorn (GDR) the nondestructive testing of roll material; H. Weeber (Dusseldorf, GDR) improving the image in transillumination pictures; T. Konkoly (Budapest, Hungary) the evaluation of radiographic pictures; K. Winkler (Waldshut, GDR) materials testing with x-rays; J. Slaba (Prague) defectoscopy with the Czech 15-MeV

Card 1/2

L [illegible]-66
ACC NR: AP6017951 17

betatron; B. Jarec (Ljubljana) the ultrasonic testing of welds; R. Gerstner (Zipf, Austria) the accuracy of ultrasonic wall-thickness measurements; H. Vogt (Cologne, GDR) automatic ultrasonic testing; W. Lehfeldt (Heppenheim, GDR) automatic ultrasonic testing of sheet materials; G. Freyer and H.-D. Tietz (Magdeburg) ultrasonic pulse-echo devices; J. Obraz (Prague) automatic ultrasonic testing of thick-walled rolled stock; K. Fischer (Jena,GDR) the B-image in ultrasonic testing; M. Sipek (Ravne) propagation and damping of plate waves in steel plate; J. Kammagic (Zenica) a defect atlas for ultrasonic defectoscopy; M. Gorsek (Store) ultrasonic tests on spherical graphite castings; G. Drechsler (Reutlingen, German Federated Republic) modern methods for the nondestructive testing of moving material; L. Duben (Prague) electromagnetic testing of metallurgical specimens and machine parts; I. Mamuzik (Sisak) the manufacture and testing of magnetic oil emulsions; M. Sipek magneto-inductive techniques for the evaluation of surface phenomena on ferromagnetic rods; S. Prcic (Novi Sad) magnetic powder testing of tool-factory specimens; J. Pogacor (Ljubljana) the work of the 5th International Institute for Welding Technology; E. G. Fuchs (Budapest) a novel instrument for nondestructive microstructure testing of metallic construction materials; and A. Houbova (Bratislava, Czechoslovakia) discussed the status of nondestructive test methods in Czechoslovakia.

SUB CODE: 13,11,18 SUBM DATE: none

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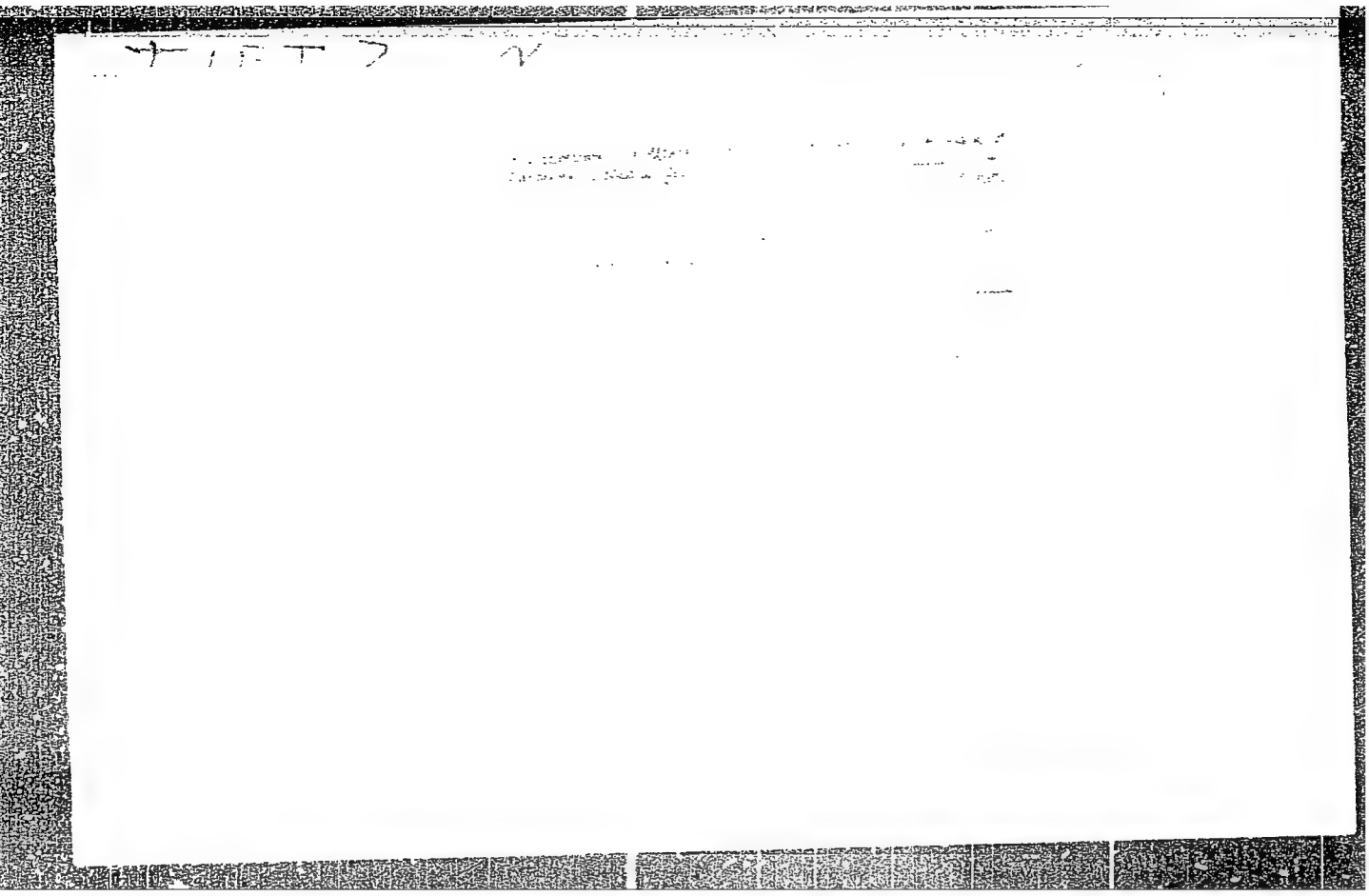
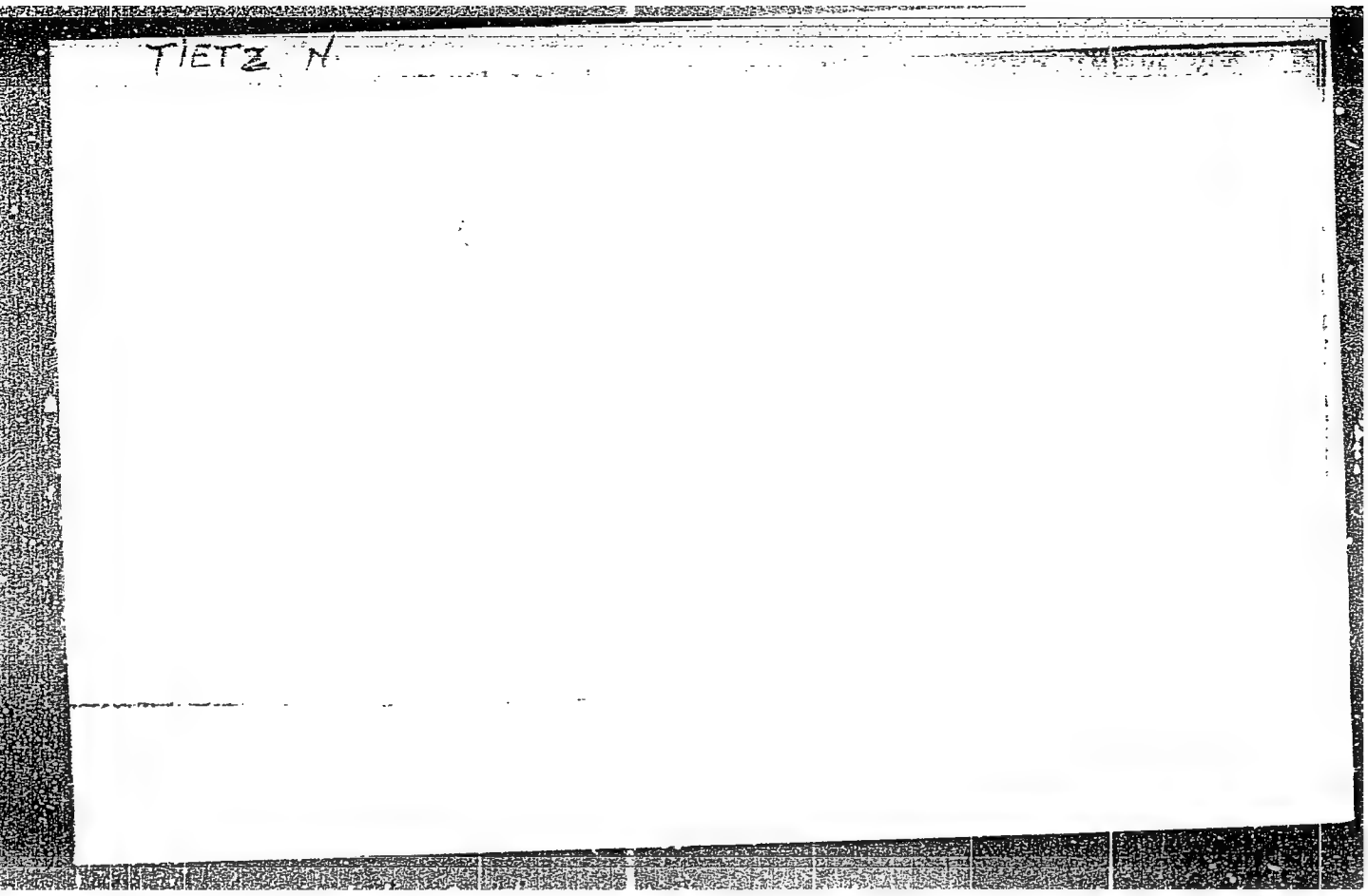
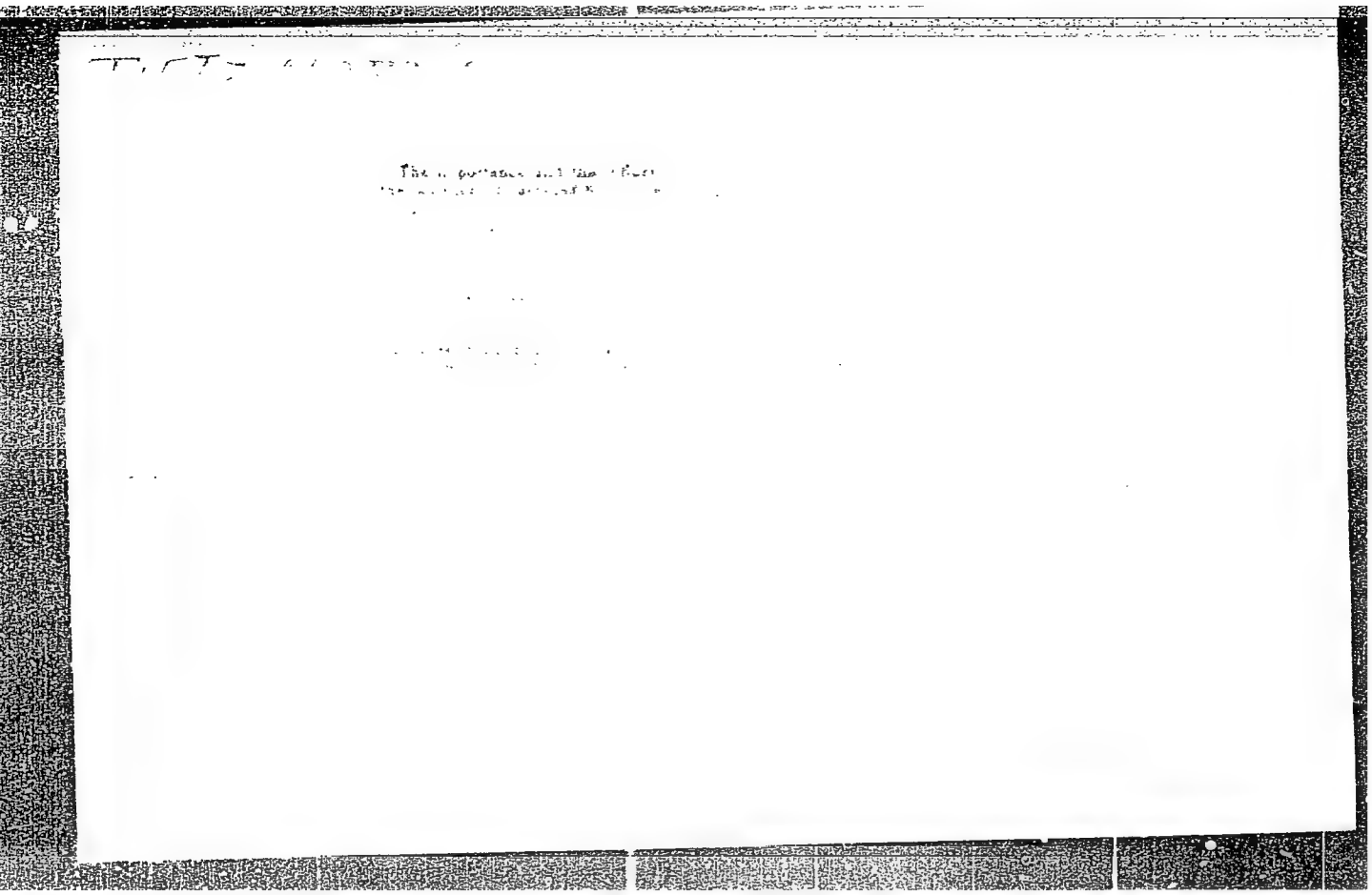






TIETZ, Narcis, inz.; TOMAN, Vaclav, inz.; TUMA, Hanus, inz.

The importance and effect of electrolytes in isolating carbides from steel. Hut listy 12 no.6:517-521 Je '57.

1. Vyzkumny ustav materialu a technologie, Praha.

TIETZ, N.

The importance and effect of electrolytes during the isolation of carbides from steels. p.517.
(Hutnicke Listy, Vol. 12, No. 6, June 1957, Brno, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, No. 9, Sept. 1957, Uncl.

TIETZ, N.

Photocolorimetric determination of zircoium with morin.

p. 722 (CHEMICKE LISTY) Vol. 51, no. 4, Apr. 1957,
Praha, Czechoslovakia

SO: Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 3,
March 1958

CZECHOSLOVAKIA/Optics - Optical Methods of Analysis K-8

Abs Jour : Ref Zhur - Fizika, No 12, 1958, No 28838

Author : Turn H., ~~Tietz N.~~
Inst : Not Given
Title : Photocolorimetric Determination of Zirconium with the Aid of Morin.

Orig Pub : Collect. czechosl. chem. communs, 1958, 23, No 1, 142-146

Abstract : Translation from Chem. listy, 1957, 51, 722

Card : 1/1

Abs Jour : Ref Zhur - Khimiya, No 8, 1958, 24782

being added to the solutions being analyzed. Photometry is conducted at 436 mμ (light filters OB 2 and Wratten 50). Fe^{2+}, Cr^{3+}, Ni^{2+}, Co^{2+}, Al^{3+} (up to Al:Zr = 1:1) and traces of some other cathions do not interfere with determination of Zr. Fe^{3+} must be reduced by addition of 1 ml of 2% aqueous solution of ascorbic acid. The interfering effect of the color of Cr^{3+}, Ni^{2+}, Co^{2+} and other cathions is eliminated by means of a compensative solution (solution of the sample being analyzed, containing in lieu of I 1 ml CH_3OH). NaCl and NH_4Cl do not interfere. The method is rapid and particularly suited for analyses of steels and carbides.

5

ACCESSION NR: AP4010413 Z/0034/64/000/001/0072/0073

AUTHOR: Tietz, N. (Engineer)

TITLE: Heat-resistant alloy resistant to effects of sulfur and products which originate during the production of carbon disulfide

SOURCE: Hutnicke listy, no. 1, 1964, 72-73

TOPIC TAGS: alloy, heat resistant alloy, heatproof alloy, refractory alloy, carbon disulfide production. (Class 18d, 2/40, PV 262-62 from 15 January 1962)

ABSTRACT: In addition to iron, the alloy contains 0.25 to 0.80% carbon, 0.40 to 0.70% manganese, 0.01 to 0.03% phosphorus, 0.01 to 0.04% sulfur, 4 to 6% silicon, 27 to 29% chromium, 8 to 10% nickel, 1.5 to 3% molybdenum, and 3 to 5% tungsten. [Abstractor's note: this is a complete translation of the original article.] Orig. art. has: no graphics.

ASSOCIATION: none

Card 1/2

L 34916-66 EWP(t)/ETI IJP(c) JD/JH

ACC NR: AP6026598 SOURCE CODE: CZ/0034/66/000/002/0131/0132

AUTHOR: Tietz, Narcis (Engineer)

ORG: State Research Institute for Construction Materials, Prague (Statni vyzkumny ustav materialu)

TITLE: Determination of Mg in aluminum alloys and in cast iron by means of atomic absorption spectrophotometry

SOURCE: Hutnicke listy, no. 2, 1966, 131-132

TOPIC TAGS: magnesium alloy, aluminum containing alloy, cast iron, spectrophotometry, metal analysis

ABSTRACT: The described method is simple, sensitive, accurate and suitable for Mg concentrations of 0.05% to 10%. The method is suitable for all metallurgical laboratories, and for analyses of metals in machinery producing plants. Detailed instruction for the analysis are given. The author thanks Dr. I. Rubeska and Dr. B. Moldan at the laboratory of the Central Geologic Institute for assistance with the carrying out of the measurements and valuable comments. Orig. art. has: 2 tables. [JPRS: 34,779]

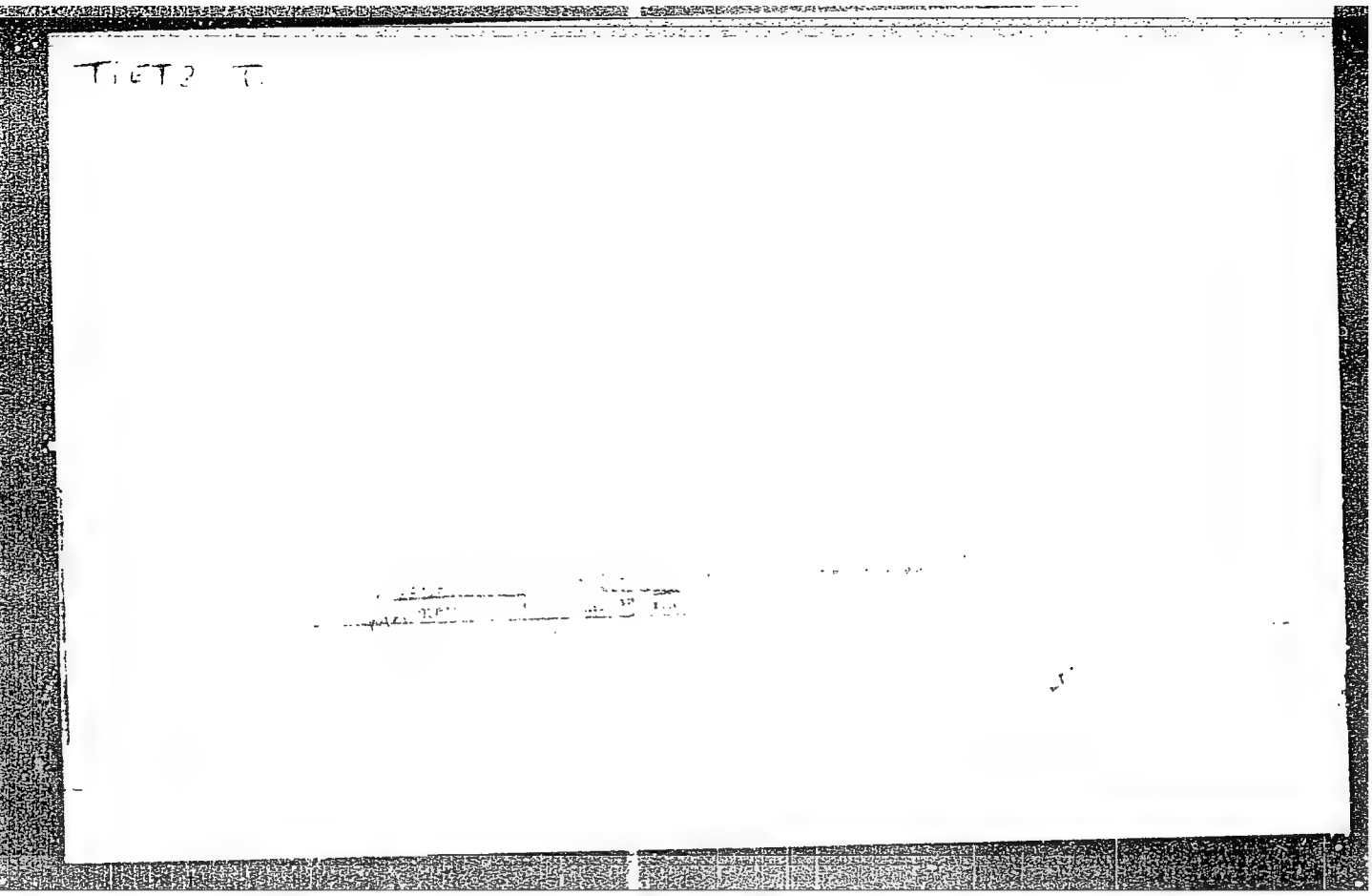
SUB CODE: 11, 20 / SUBM DATE: none / ORIG REF: 001 / OTH REF: 007

Card 1/1

Poland

CEPU.

✓Approximate analytic solution of the Thomas-Fermi equation for atoms. F. [illegible] (Univ. Nikolas Copernicus, Torun, Poland). *J. Chem. Phys.* 22, 2091–5(1954).—The solu. of the Thomas-Fermi equation for atoms is reducible to the soln. of the equation $d^2\phi/dx^2 = x^{-1/2}\phi^{3/2}$, $\phi(\infty) = 1$, $\phi(\infty) = 0$. The following soln. is proposed: $\phi = a^{1/2}x^{-1}$, where a is a const. and from the radial momentum distribution function is equal to [illegible]. Calcd. values are compared with those of [illegible] 38 ref.



TIETZ, T.

Hungary/Atomic and Molecular Physics - Physics of the Atom, D-1

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 34258

Author: Tietz, T.

Institution: Torun, Poland

Title: Calculation of the Eigenvalues of the Schroedinger Equation in a Limited Region

Original Periodical: Acta phys. Acad. sci. hung., 1955, 5, No 3, 347-352; Hungarian

Abstract: Using as examples the Schroedinger equations for hydrogen and for the linear anharmonic oscillator, the author shows the relationship between the eigenvalue and the numbers of zeros corresponding to the eigenfunction. The parameter α, which determines the eigenvalue, satisfies the inequality $-s \leqslant -\alpha \leqslant -s+1$. An analogous relationship holds, apparently, in all cases when the solution is represented in the form of a degenerate or complete hypergeometric function. The eigenvalue is obtained more accurately from the actual conditions at the boundary of the region.

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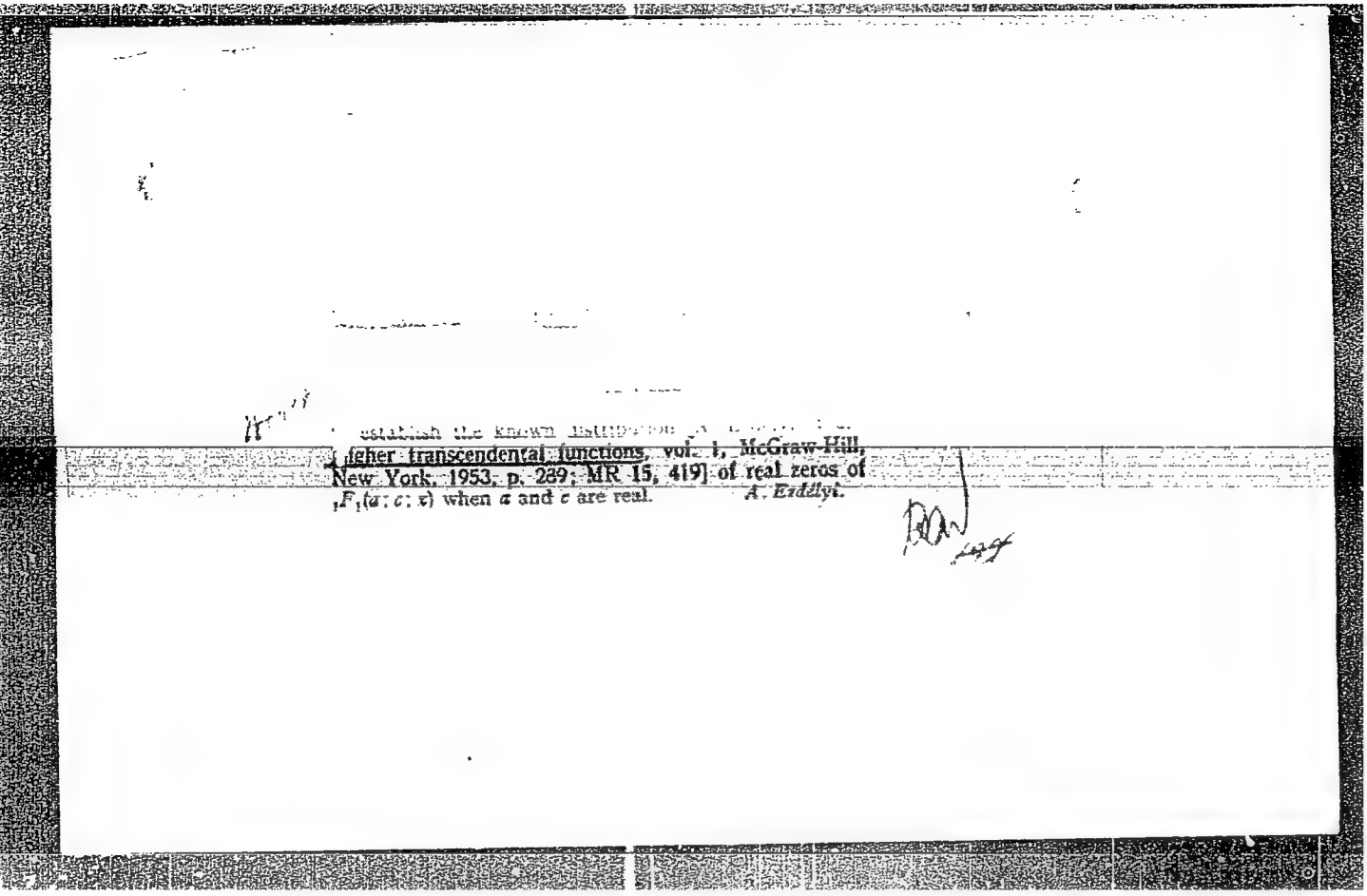
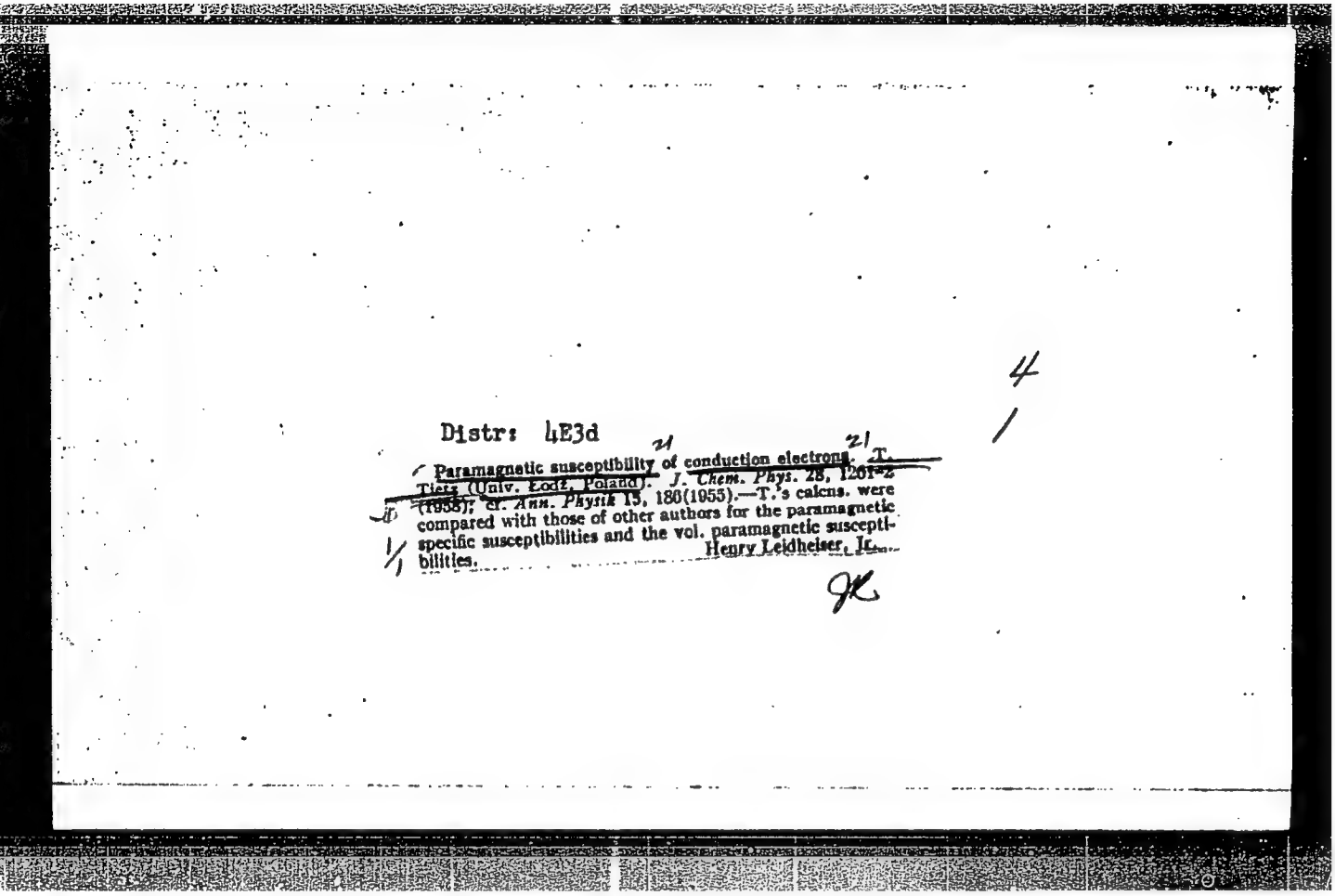


establish the known distribution [illegible]

gher transcendental functions, vol. 1, McGraw-Hill, New York, 1953, p. 289; MR 15, 419] of real zeros of ${}_2F_1(a; c; z)$ when a and c are real. *A. Erdélyi.*



4

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Distr: 4E3d

Paramagnetic susceptibility of conduction electrons. T. Tietz (Univ. Łodź, Poland). *J. Chem. Phys.* 23, 1201-2 (1955); cf. *Ann. Physik* 15, 180(1955).—T.'s calcns. were compared with those of other authors for the paramagnetic specific susceptibilities and the vol. paramagnetic susceptibilities. Henry Leidheiser, Jr.

1/1

Tietz, T.

Reply to Tietz' letter: "Approximate analytic solution of the Thomas-Fermi equation for atoms." H. C. Brinkman (T. Stieltjes Inst., Neth.). *J. Chem. Phys*, 23, 1560(1955); cf. *C.A.* 49, 12063a.—Tietz (*C.A.* 49, 3044i) modified B.'s method of solving the Thomas-Fermi equation applied to atoms. The approx. solutions do not differ much numerically for intermediate values of χ, but T.'s solution has a simpler form. For $\chi \to \infty$ B.'s solution decreases too fast and T.'s decreases too slowly. B.'s equation is linear, which greatly facilitates the application of the method to mols. Reply to Brinkman's letter concerning my letter: "Approximate analytic solution of the Thomas-Fermi equation for atoms." T. Tietz (Univ. Łódź, Poland). *Ibid.* 1560–1.—The application of B.'s method to the problems of the free pos. ion, the compressed neutral atom, and the solution of the Schrödinger equation for an approx. at. field is difficult, whereas T.'s method seems to be applicable.

Henry Leidheiser, Jr.

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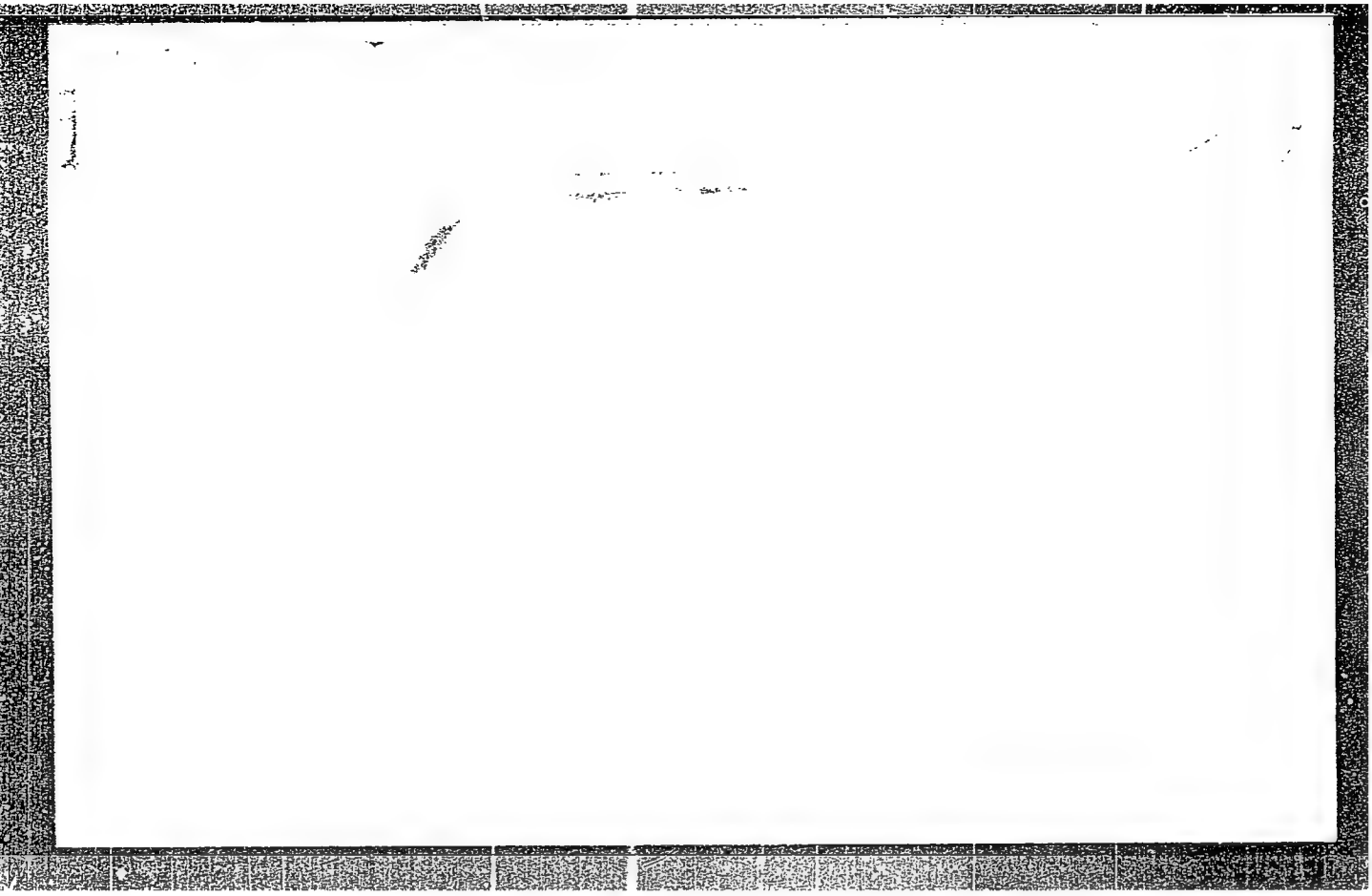


TITS, T.

SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1392
AUTHOR TITC, T.
TITLE On the Selection of the Physically Applicable Solutions of the SCHROEDINGER equation for the Hydrogen Atom.
PERIODICAL Žurn.eksp.i teor.fis, 30, fasc.5, 948-949 (1956)
Issued: 8 / 1956 reviewed: 10 / 1956

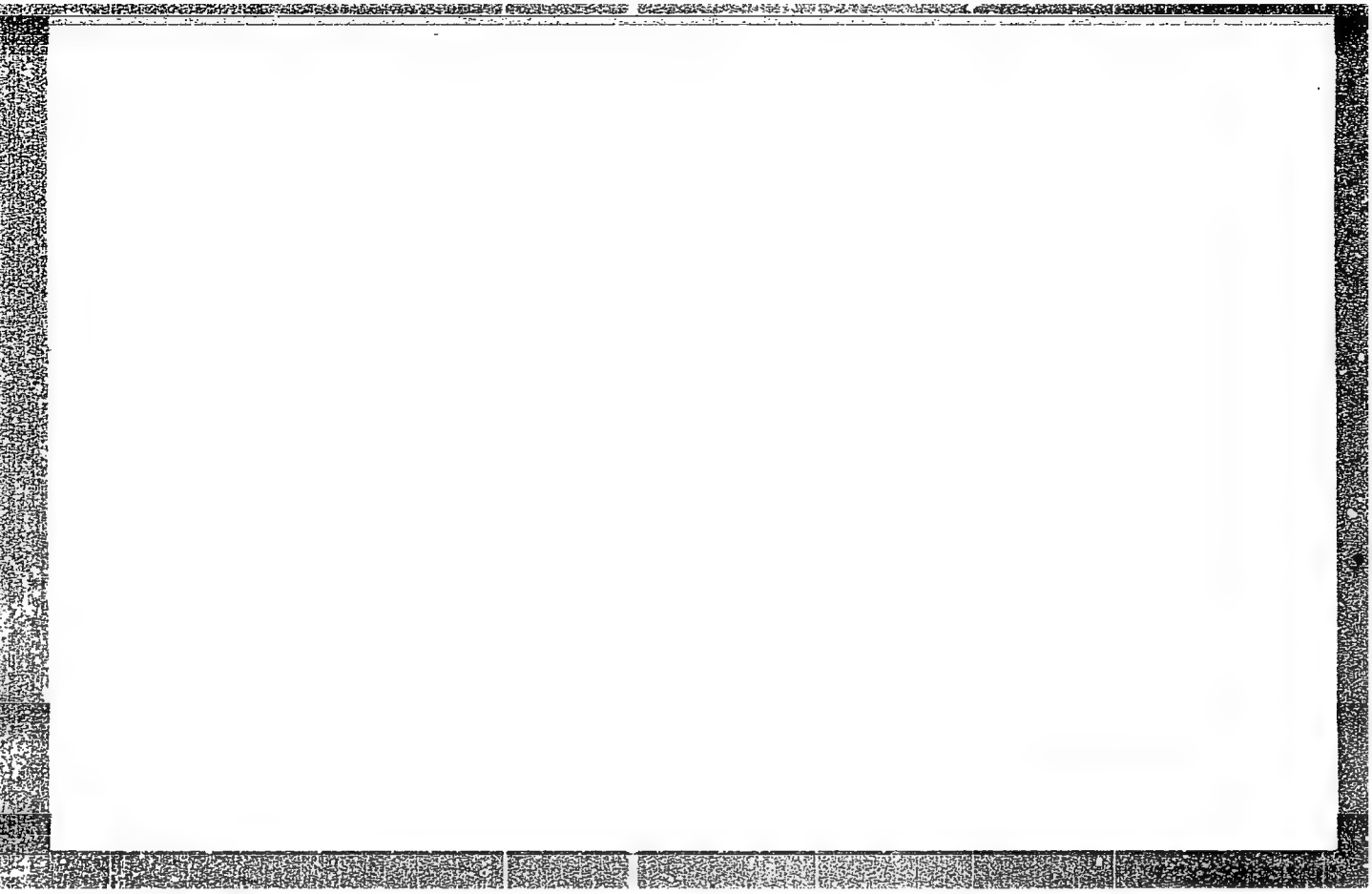
The wave function $\Psi(r,\vartheta,\varphi) = R(r)P_1^m(\cos\vartheta)e^{\pm im\varphi}$ leads (in atomic units) to the following differential equation for R:

$d^2R/dr^2 + (2/r)dR/dr + (2E+(2Z/r)-l(l+1)/r^2)R = 0$ (with $E < 0$). According to A.SOMMERFELD, Atomic Structure and Spectral Lines, vol.2; H.A.KRAMERS, Quantum Theory of the Electron and Radiation, Leipzig (1938), and F.RELLICH, Math.ZS. 49,719(1943/44) the second particular solution is not to be omitted in the case of l=0, because all particular solutions are normalizable. According to the author's opinion this is not correct.
It is intended to show here that, with l=0, there exists only one normalizable solution, and that at the point r=0 a certain boundary condition must be imposed in order to obtain the correct spectrum of eigen values. For l=0 there are the following independent particular solutions: $R_1 = e^{-\varrho/2}\,{}_1F_1(1-2Z/\varkappa,2,\varrho)$; $R_2 = e^{-\varrho/2}\,\phi(1-2Z/\varkappa,2,\varrho)$. The following abbreviations were used on this occasion: $2E = -\varkappa^2/4$; $\varkappa\, r=\varrho > 0$. ${}_1F_1$ is the confluent hypergeometrical progression and ϕ is the second independent solution of the confluent hypergeometric differential

Žurn.eksp.i teor.fis, 30,fasc.5,948-949 (1956) CARD 2 / 2 Pa - 1392

equation. An integral equation is then given for ϕ, and the asymptotic form of this function for $\varrho \to +\infty$ is $\phi(a,b,x)=x^{-a}\left[1+O(1/x)\right]$. Therefore the here investigated second solution R_2 with $\varrho=+\infty$ is $R_2=e^{-\varrho/2}\varrho^{-\left[1-(2Z/\varkappa)\right]}\left[1+O(1/\varrho)\right]$. This formula shows that the second particular solution can be normalized. For small r it applies that $\lim \varrho \to +0\ R_2 = (e^{-\varrho/2}/\Gamma\left[1-(2Z/\varkappa)\right])\,(1/\varrho)$. R_2 is therefore normalizable for all eigenvalues $E \neq 0$, and there always exists a normalizable solution. However, normalization conditions are insufficient for the determination of the correct spectrum of the eigenvalues. This deficiency can be removed by imposing a second boundary condition which expresses the steadiness of the solution at zero. If we demand $1-(2Z/\varkappa)=-n, n=0,1,2,\ldots$, the ϕ is, as we know, reduced to LAGUERRE polynomials, and therefore R_2 is steady in the case of r=0. With $1-(2Z/\varkappa)=-n$ the functions of R_1 and R_2 are linearly dependent but with $1-(2Z/\varkappa)=n-n$ (or "-n" ?) they are linearly independent. With l=0, also WEYL'S theory requires an additional boundary condition. In the present case the demand for steadiness corresponds to the selection of a certain fully determined WEYL boundary condition for r=0. Thus, the demand for steadiness warrants a physically correct spectrum of the eigenvalues. Also the boundary condition in the case of r=0 may be explained quite simply by using the demand for self-adjointness.

INSTITUTION: University of Torun, Poland.



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Acta Physica Academiae
Scientiarum Hungaricae
Vol.7, Nr. 4, 1957

ON THE DIAMAGNETISM OF THE THOMAS-FERMI ION

By

T. Tietz

LÓDZ UNIVERSITY, DEPARTMENT OF THEORETICAL PHYSICS, LÓDZ, POLAND

(Presented by P. Gombás. — Received 30. IV. 1957)

In this paper the author derives a simple and accurate approximate formula for free positive ions. The accuracy of this formula is proved by comparison of the values calculated from it with the exact numerical values of Fermi. As a further example of the accuracy of this formula the diamagnetic susceptibility of the Thomas-Fermi ion is calculated as a function of the atomic number and valency of the ion. The experimental results for the susceptibilities of alkali and alkali earth metal ions are in good agreement with the theory.

EAST GERMANY/Theoretical Physics - Quantum Mechanics.

Abs Jour : Ref Zhur - Fizika, No 6, 1959, 12173

Author : Nowak, W., Tietz, T.

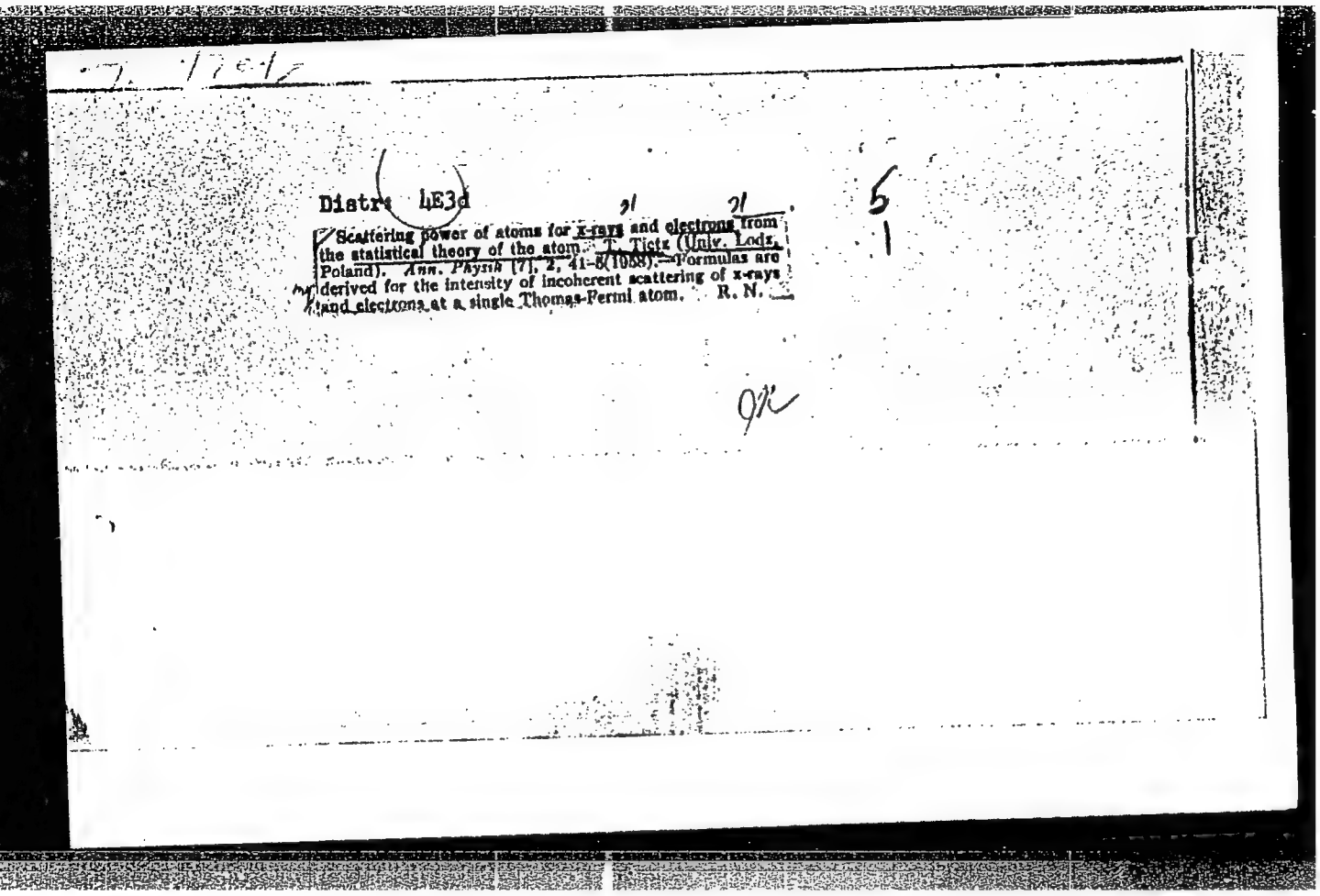
Inst : University, Lodz, Poland

Title : Simplification of the Sommerfeld Method of Polynomials.

Orig Pub : Ann. Physik, 1958, 1, No 4-5, 296-298.

Abstract : The Sommerfeld method for determining the eigenvalues of the Schroedinger equation is based on representing the equation in the form $R = yf_1$, where y insures the satisfaction of the boundary conditions $R(\infty) = R(0) = 0$. The function f_1 is represented by a power series and the eigenvalues are found from the condition of cutoff of this series. The author considers when the equation for f_1 is in the form

Card 1/2



Distr: 4E3d

Scattering power of atoms for x-rays and electrons from the statistical theory of the atom. T. Tietz (Univ. Lodz, Poland). *Ann. Physik* (7), 2, 41-8(1958).—Formulas are derived for the intensity of incoherent scattering of x-rays and electrons at a single Thomas-Fermi atom. R. N.

HUNGARY/Atomic and Molecular Physics - Physics of the Atom. D

Abs Jour : Ref Zhur Fizika, No 12, 1959, 27051

Author : Tietz, T.

Inst : Institute of Theoretical Physics, University of Lodz, Lodz, Poland

Title : Analytic Formula for Theory of Formation of Electron Groups in the Periodic System of Elements

Orig Pub : Acta phys. Acad. scient. hung., 1958, 9, No 1-2, 73-77

Abstract : Using the approximation proposed by the author for the Thomas-Fermi function $\varphi(x) = \sqrt{1 + (\pi/8)^{2/3} x}^{-2}$, an analytic formula is derived for the lower limit of the values of the atomic number Z, at which the s, p, d, and f electrons appear for the first time. -- V.V. Batygin

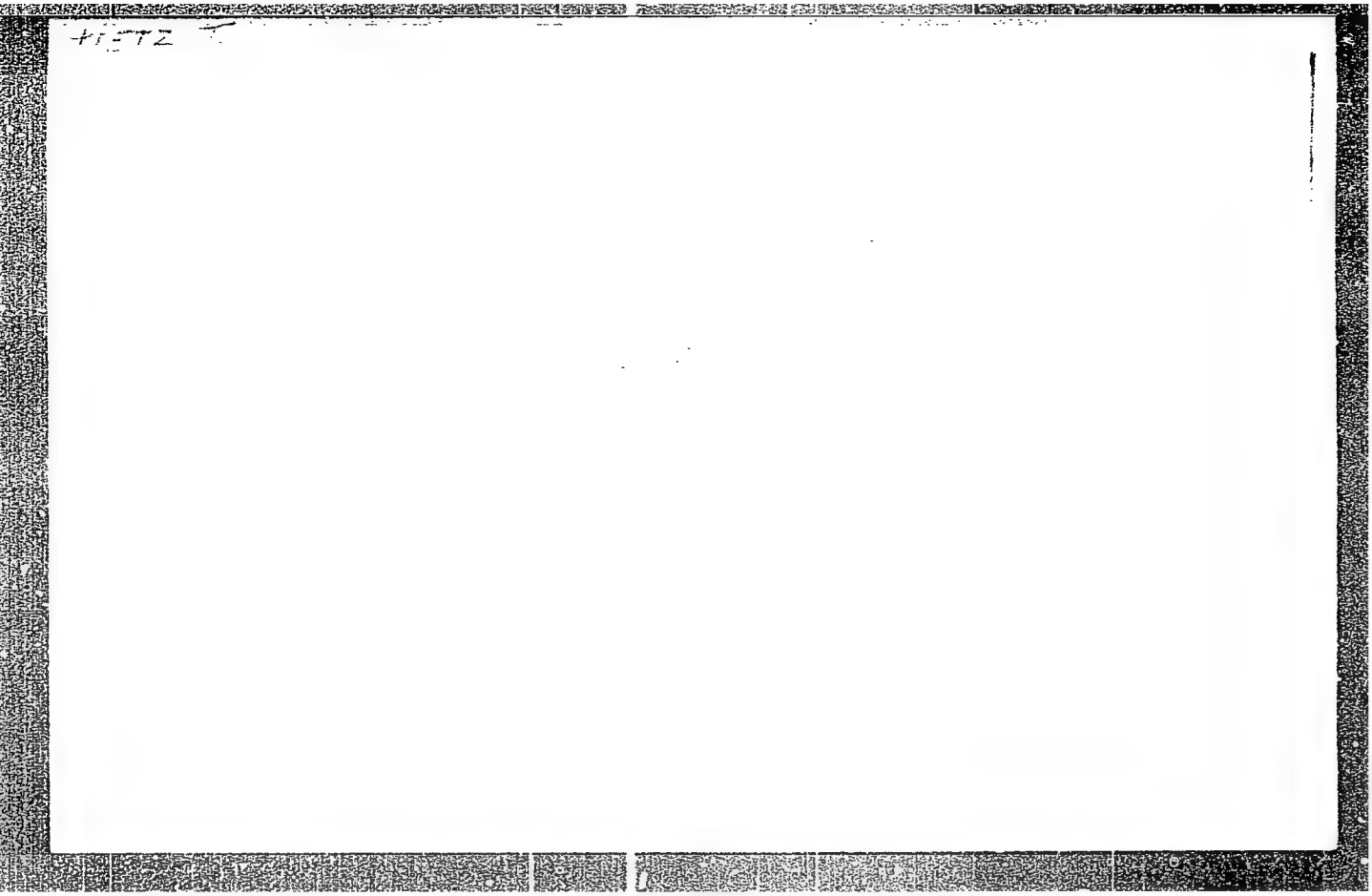
Card 1/1

HUNGARY/Atomic and Molecular Physics - Physics of the Atom. D

Abs Jour : Ref Zhur Fizika, No 9, 1959, 19967

atomic number. The obtained formula is in good agreement with the numerical calculations. -- V.P. Trubitsyu

Card 2/2

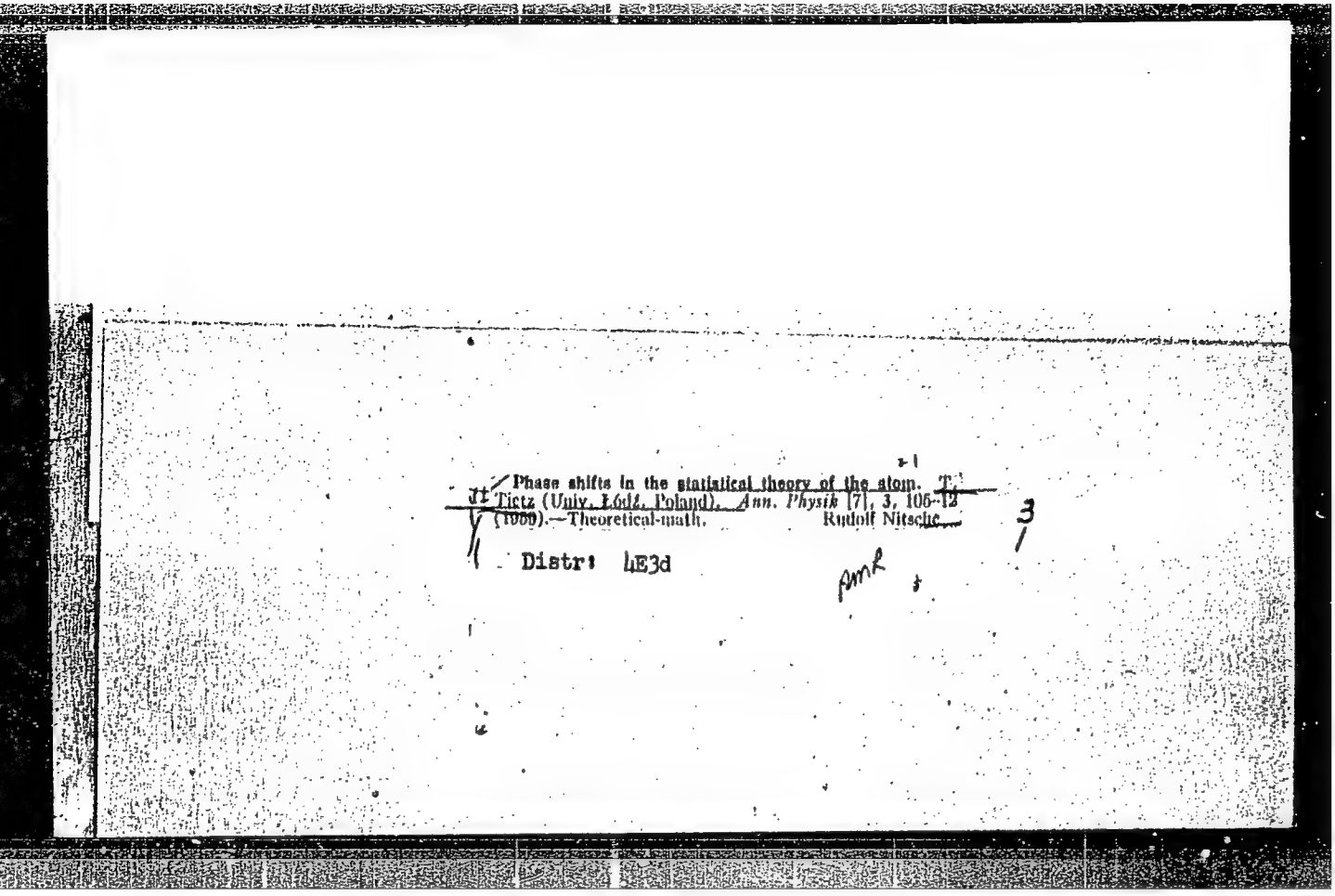


Approximate analytical solution of the Schrödinger equation for the Thomas-Fermi potential for the s states. T. Tietz (Univ. Lodz, Poland). *J. Chem. Phys.* 29, 684-8 (1958).—Simple and accurate wave functions were given for the 1s, 2s, and 3s states. The eigenvalues agree quite well with the precise eigenvalues of Latter (*C.A.* 49, 15445c) for the Thomas-Fermi potential. Henry Leidheiser, Jr.

TIETZ, T.

The total effective cross section and the diffusion-scattering cross section of Hartree potentials. T. Tietz (Univ. Lodz, Poland). *Ann. Physik* [7], 2, 387–92(1959).—Theoretical-math. Analytical approxns. are derived for the effective cross section and the diffusion-scattering cross section of neutral atoms for electrons by means of Born's first approxn. Rudolf Nitsche

2-9E3c
9E3d
1-KS
3



Phase shifts in the statistical theory of the atom. T. Tietz (Univ. Łódź, Poland). *Ann. Physik* [7], 3, 105–12 (1959).—Theoretical-math. Rudolf Nitsche

Distr: 4E3d

TIETZ, T.

Distr: 4E3c 2 cys

Calculation of the differential elastic cross section for complex atoms for the self-consistent field. T. Tietz (Univ. Łodź, Poland). *Acta Phys. Acad. Sci. Hung.* 10, 251-2 (1959)(in English).—By using the Gáspár approxn. for the ratio effective nuclear charge/at. no. (G., *CA* 47, 9135e) in the Thomas-Fermi potential formula an analytic expression for the differential elastic cross section is obtained.

E. M. ~~Loebl~~

TIETZ, T.

Thomas-Fermi model for diatomic hydrides. T. Tietz (Univ. Łódź, Poland). *J. Chem. Phys.* 30, 1104–5(1959). By using the Kobayashi and Taima table (*Mem. Fac. Liberal Arts Educ. Kagawa Univ.*, Part II, No. 33(1957)) for the 2 Thomas-Fermi functions, the no. of free electrons, force consts., and the *M* diamagnetic susceptibilities were calcd. for the diat. halides of the elements. H. Leidheiser, Jr.

3

4E2C

MA 1/1

Tietz, T.

3
IJP(c)

Theory of the effective range. T. Tietz (Univ. Łódź, Poland). *Ann. Phys.* 6, 150–2(1960).—Theoretical math. A formula is derived for the phase shift of the Yukawa potential which allows the calcn. of the interaction cross section of neutron-proton scattering at low energies. R. Nitsche

TIETZ, T.

4
IJP(c)

Scattering of electron beams with neutral atoms for different Thomas-Fermi potentials. T. Tietz. (Univ. Łódź, Poland). *Ann. Physik* 6, 262-6(1960).—Theoretical-math. Exact and approx. formulas for the differential elastic scattering cross section at different Thomas-Fermi potentials are derived and compared with Hartree's values.
R. Nitsche

TIETZ, T.

Pair-production cross section for high photon energies for the Thomas-Fermi and Hartree atom. T. Tietz (Univ. Lodz, Poland). *Acta Phys. Acad. Sci. Hung.* 11, 47–51 (1960)(in English).—The total cross-section formula for pair production in the field of an atom of at. no. Z for high photon energies E, ($E \gg 137mc^2Z^{-1/3}$) is derived, anal. representations of the Thomas-Fermi function $\varphi(x)$ and the Hartree functions Z_p/Z being used. The numerical values calcd. for the total cross section for pair production for Hg agree well with the values of Fraser (*CA* 46, 9433*c*) and Bethe and Heitler (*CA* 28, 7146[9]). C. Ollivier-Rutgers

TIETZ, T.

Penetrability of a Thomas-Fermi potential barrier. I. Tietz (Univ. Lodz, Poland). *Acta Phys. Acad. Sci. Hung.* 11, 53–7(1960)(in English).—The effect of the surrounding electrons on the nuclear-barrier penetration probability is considered. For a free neutral atom the Thomas-Fermi potential barrier is accepted, and the probability that a particle will penetrate this potential barrier is calcd.; Langer's approxn. is used, and the angular momentum of the penetrating particle is taken into account. The effect of the surrounding electrons causes the lowering of the barrier height and the decrease of the thickness to be penetrated. The theory is applied to the evaluation of the penetration probability of an α-particle in a Rn^{111} nucleus.
C. Olivier-Rutgers

TIETZ, T.

Phase shift analysis of combined Coulomb and nuclear scattering
Acta phys Hung 11 no.3:235-238 '60. (EEAI 9:10)

1. Institute of Theoretical Physics, University Lodz, Lodz, Poland. Presented by A.Konya.
(Protons)

TIETZ, T.

On the eigenvalues and eigenfunctions of the Schrodinger equation for the Thomas-Fermi potential. Acta phys Hung 11 no.4:391-400 '60. (EEAI 10:2)

1. Physikalisches Institut der Universitat Lodz, Lodz, Polen. Vergelegt von A.Konya.
(Eigenfunctions) (Potential, Theory of)
(Differential equations)

TIETZ, T.

An exact method for finding the phase shifts of the Dirac's equations for non-singular potential. Acta phys Hung 11 no.4:417-418 '60.
(EEAI 10:2)

1. Department of Theoretical Physics, University Lodz, Lodz, Poland
(Dirac equation) (Potential, Theory of)

TIETZ, T.

Phase shiftsof high-energy Dirac and Klein-Gordon particles. Acta phys Hung 12 no.1:85-88 '60. (EEAI 10:2)

1. Department of Theoretical Physics, University Lodz, Lodz, Poland
(Dirac equation) (Particles)

S/058/62/000/004/126/160
A061/A101

AUTHOR: Tietz, T.

TITLE: Paramagnetic susceptibility of conduction electrons, calculated by analytic formulas for the theory of the formation of electron groups in the periodic system of elements

PERIODICAL: Referativnyy zhurnal, Fizika, no. 4, 1962, 68, abstract 4E582 ("Acta phys. Acad. scient. hung.", 1960, v. 12, no. 4, 291 - 295, English; Russian summary)

TEXT: The paramagnetic susceptibility of conduction electrons of some elements is calculated. The number of free electrons determining paramagnetism, which is assumed to differ from that of atoms, is found by formulas obtained by the author in his theory of the formation of electron groups in atoms (RZhFiz, 1956, no. 10, 28255; 1959, no. 12, 27051; 1960, no. 8, 19774). The values of susceptibility found by calculation are in good agreement with experimental data.

R. Suris

[Abstracter's note: Complete translation]

Card 1/1

PIEKARA, T.

Surname (Capital); Given Names

Country: Poland

Academic Degrees: [not given]

Affiliation: Institute for Theoretical Physics of the University (Institut fuer Theoretische Physik der Universitaet), Lodz

Source: Leipzig, Annalen der Physik, Vol 7, No 5-6, 1961, pp 258-262, 263-267.

Data: "The Influence of the Electron Shell of the Scattered Atom on the Asymmetry Effect."

"The Influence of the Electron Shell on the Bremsstrahlung in the Hartree and Thomas-Fermi Theory of Atom."

[redacted]. T.

SURNAME, Given Names

Country: Poland

Academic Degrees: /not given/

Affiliation: Institute for Theoretical Physics of the University, Lodz
/no original language version given/

Source: Leipzig, Annalen der Physik, Vol 7, No 7-8, 1961, pp 425-428.

Data: "Computation of the Interaction Energy of Two Identical Negative Singly Ionized Ions with a Noble-Gas Electron Structure Using Fermi-Amaldi Model."

TIETZ, T.
SURNAME (in caps); Given Names

Country: Poland

Academic Degrees: not given

Affiliation: Institute for Theoretical Physics at the University, Lodz
/no original language affiliation given/

Source: Leipzig, Annalen der Physik, Vol 8, No 1-2, 1961, pp 99-103.

Data: "Assymptotic Phase Shifts and Differential Cross-Section of Electrons in Atoms with Latter's Potential."

TIETZ, T.

The uncertainty principle and the Bohr theory. Acta phys Hung 13 no.3: 363-365 '61.

1. Department of Theoretical Physics, University Lodz, Lodz, Poland.

TIETZ, T.

An analytical expression for the potential energy function of diatomic molecules. Acta phys Hung 13 no.3:359-361 '61.

1. Department of Theoretical Physics, University Lodz, Lodz, Poland.

S/058/63/000/001/053/120
A160/A101

AUTHOR: Tietz, T.

TITLE: An analytical expression for determining the phase shifts in the statistical atom theory

PERIODICAL: Referativnyy zhurnal, Fizika, no. 1, 1963, 3 - 4, abstract 1D17 ("Ann. Phys. DDR", no. 5 - 6, 1962, 9, 295 - 300)

TEXT: A theoretical investigation was conducted of the scattering of electrons on the atoms. The scattering potential is taken in approximation of Hartree and by statistical atom theory. The Thomas-Fermi potential for free neutral atoms is approximated by Moliere and Rosenthal. With the help of Pais' approximation an analytical expression for the phase of the coherent scattering of electrons on atoms was obtained. It is a more accurate quasiclassical expression for the phase shifts. A comparison was carried out with the results of the numerical calculations for He and for the atoms with Z = 80. It is shown that Pais' approximation improves the conformity between the numerical and quasiclassical methods. For small scattering shifts, the results found well coincided with the numerical calculations.

Ye. Pshenichnov

[Abstracter's note: Complete translation]

Card 1/1

TIETZ, T.

A continuous absorption coefficient of negative hydrogen and lithium ions. Acta phys Hung 14 no.1:1-9 '62.

1. Department of Theoretical Physics, University Lodz, Lodz, Poland. Presented by Albert Konya.

TIETZ, T.

Electronic polarizabilities of free neutral atoms in the Thomas-Fermi theory. Acta phys Hung 14 no.4:381-382 '62.

1. Department of Theoretical Physics, University Lodz, Lodz, Poland.

TIETZ, T.

A direct proof for the condition of the method of the stationary phase integral for radial Schrodinger equation. Acta phys Hung 14 no.4:383-385 '62.

1. Department of Theoretical Physics, University Lodz, Lodz, Poland.

TITTS, T. [Tietz, T.]; VOYCHEK, L. [Wojtczak, L.]

Formula for the calculation of phase shifts in the case of Thomas-Fermi and Hartree potentials. Zhur. eksp. i teor. fiz. 43 no.1:87-88 Jl '62. (MIRA 15:9)

1. Institut teoreticheskoy fiziki pri universitete v Lodzi, Pol'sha.
(Quantum field theory)

TIETZ, T.

The pair production cross section for high photon energies for the Thomas-Fermi and Hartree atom. Acta phys Hung 11 no.1:47-51 '60.
(EEAI 9:10)

1. Department of Theoretical Physics of the University Lodz, Lodz, Poland. Presented by A.Konya.
(Photons) (Atoms) (Electrons)

TIETZ, T.

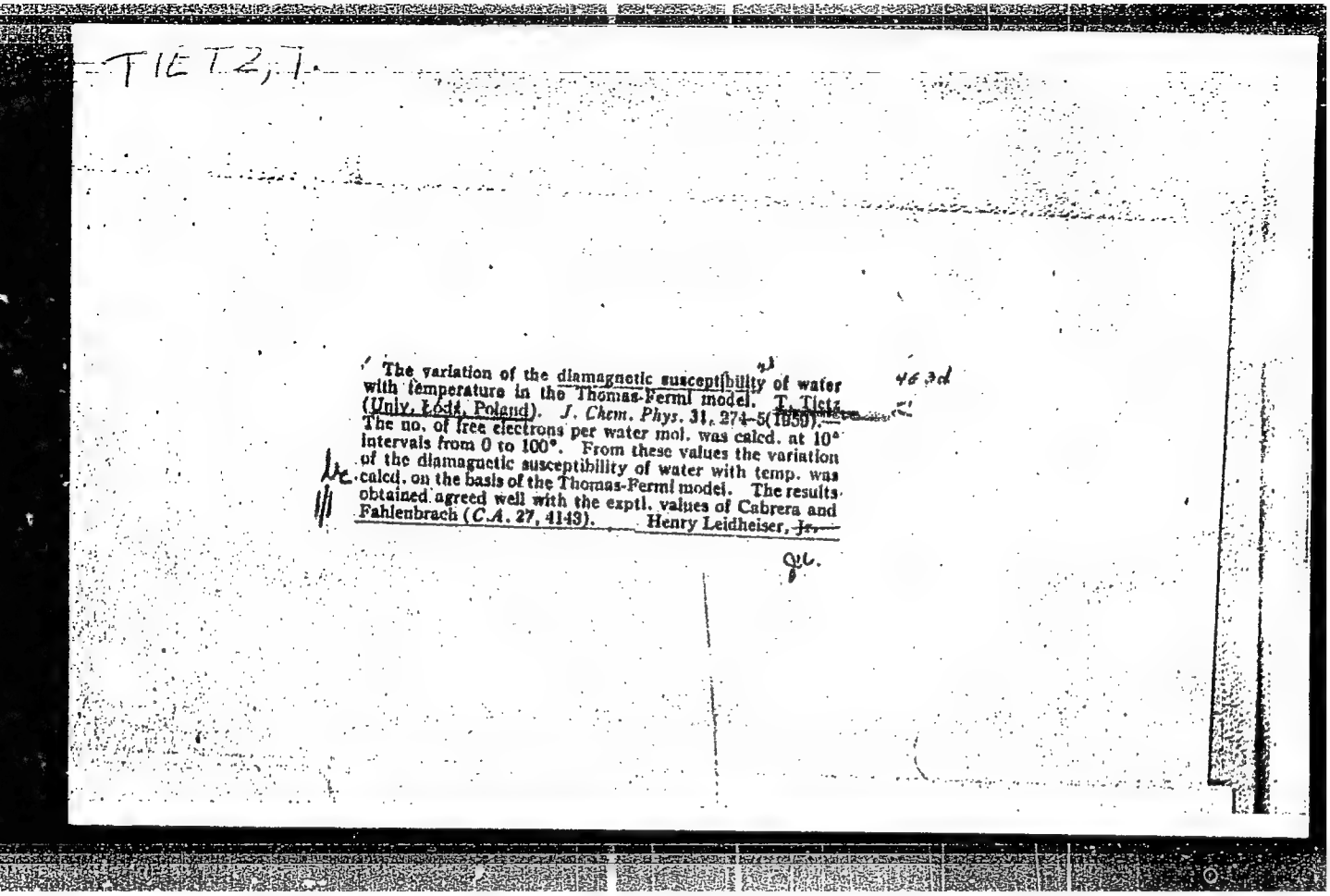
The penetrability of a Thomas-Fermi potential barrier. Acta phys Hung 11 no.1:53-57 '60. (EEAI 9:10)

1. Department of Theoretical Physics, University, Lodz, Lodz, Poland. Presented by A.Konya.
(Atoms) (Electrons) (Particles) (Alpha rays)

TIETZ, T.

Elastic scattering of electrons by an approximate potential of the self-consistent field for ions in the first and second born approximation. Acta phys Hung 11 no.3:259-264 '60. (EEAI 9:10)

1. Institute of Theoretical Physics, University Lodz, Lodz, Poland. Presented by A.Konya.
(Electrons) (Ions)



TIETZ, T.

The variation of the diamagnetic susceptibility of water with temperature in the Thomas-Fermi model. T. Tietz (Univ. Łódź, Poland). *J. Chem. Phys.* 31, 274–5(1959).—The no. of free electrons per water mol. was calcd. at 10° intervals from 0 to 100°. From these values the variation of the diamagnetic susceptibility of water with temp. was calcd. on the basis of the Thomas-Fermi model. The results obtained agreed well with the expti. values of Cabrera and Fahlenbrach (*C.A.* 27, 4143). Henry Leidheiser, Jr.

TIETZ, T.

A new method for finding the phase shifts for the Schrodinger equation. Acta phys Hung 16 no.3:289-292 '63.

1. Department of Theoretical Physics, University of Lodz, Lodz, Poland.

TIETZ, T.

Pais approximate formula for the phase shift and electron scattering in the Thomas-Fermi theory. Acta phys Hung 16 no.1:1-6 '63.

1. University Lodz, Department of Theoretical Physics, Lodz, Poland. Presented by Albert Konya.

TIETZ, T.

The scattering and polarization of electrons by Hartree and Thomas-Fermi atoms. Acta phys Hung 16 no.1:7-12 '63.

1. University Lodz, Department of Theoretical Physics, Lodz, Poland. Presented by Albert Kónya.

TIETZ, Tadeusz

Feliks Joachim Wisniewski, 1890-1963. Postepy fizyki 15 no.5:475-477 '64.

1. Department of Theoretical Physics, University, Lodz.

TIETZ, T.

Scattering amplitude of high energy Klein-Gordon and Dirac particles. Acta phys Hung 17 no.3:383-385 '64.

1. Department of Theoretical Physics, University of Lodz, Lodz, Poland.

TIETZ, T.

A simple potential curve for diatomic molecules. Acta physica Pol 26 no.3/4:353 S-O '64.

1. University, Lodz.

TIFBENKEL', M.O.

Gear-teeth chamfering cutters with hard-alloy tips. Mashinostroitel' no.12:19 D '61. (MIRA 14:12)
(Metal-chutting tools)

TIFEA, V.

(2)

RUMANIA

Prof E. ABUREL, Dr G. ZERVOS, Dr A. RUSU, Dr V. TIFEA and Dr S. PANA; First Obstetric and Gynecologic Clinic (Clinica I de obstetrica si ginecologie) "Filantropia," College of Medicine and Pharmacy, Bucharest.

"Immunology and Therapy of Trichomonas vaginalis."

Bucharest, Microbiologie, Parazitologie, Epidemiologie, Vol 8, No 2, Mar-Apr 63; pp 145-152.

Abstract [English summary modified]: Intradermal testing with antigen prepared from clinical siolate: 163 of 262 tests were positive including 16 false positives; there were also 12 false negatives. Same antigen used as vaccine by pricking intravaginal mucosa in 100 women with severe trichomonal vaginitis: excellent clinical results in 89; side effects mild: low fever in 5, slight erythema in 10. In vitro and clinical (4 patients) preliminary experiments with an effective hyperimmune serum are also reported.

1/1

TIFERIS, G. L.

Carbonization of products made of cement and the like, with a calcareous bonding material. A. M. Fainberg and G. L. Tiferis, U.S.S.R. 69,250, Nov. 30, 1947. To increase the mech. strength of structural objects made with calcareous cements or mixes, they are preliminarily dried and then satd. with CO_2 until they attain a porosity of 10%. For, this process waste gases from lime kilns can be used.

M. Hosch

CA

Carbonization of products made of cement and the like, with a calcareous binding material. A. M. Paltberg and G. L. Tiferis. U.S.S.R. 69,250, Nov. 30, 1947. To increase the mech. strength of structural objects made with calcareous cements or mixes, they are preliminarily dried and then satd. with CO_2 until they attain a porosity of 10%. For this process waste gases from lime kilns can be used. M. Hoch

L 25392-65 EWT(1)/EEC(t) Peb IJP(c)

ACCESSION NR: AP5002157 S/0120/64/000/006/0089/0093

17

AUTHOR: Borovitskiy, S. I., Starodumov, M. N.; Tiflov, V. I. B

TITLE: Control unit for an outfit for detecting a nuclear magnetic resonance by the spin-echo method

SOURCE Pribory i tekhnika eksperimenta, no. 6, 1964, 89-93

TOPIC TAGS: nuclear magnetic resonance, spin echo method

ABSTRACT: When master-oscillator pulses with period τ_0 are applied to the input of the control unit (see Enclosure 1), one of these four programs is formed at the output: (1) Program I which corresponds to the method of detecting spin-echo signals described by H. Y. Carr, et al. (Phys. Rev., 1954, 94, [illegible]. (2) Program II produces two pulses with a variable distance between them [illegible] of the [illegible] the magnetic [illegible]

Card 1/3

L 25392-65

ACCESSION NR: AP5002157

permit determining T_1; (3) Program III yields three 90^0 pulses used for determining T_2; the interval between the first two pulses is τ_0 while the third pulse can be shifted; (4) Program IV yields two pairs of pulses with τ_0 interval within each pair and a variable distance between the pairs; this program is particularly suitable for measuring T_1 of the order of [illegible] seconds. Tests showed that the control unit operates reliably [illegible] msec or more duration in a period [illegible]. The output pulse amplitude was about 60 v, their duration [illegible]. Orig. art. has: 3 figures.

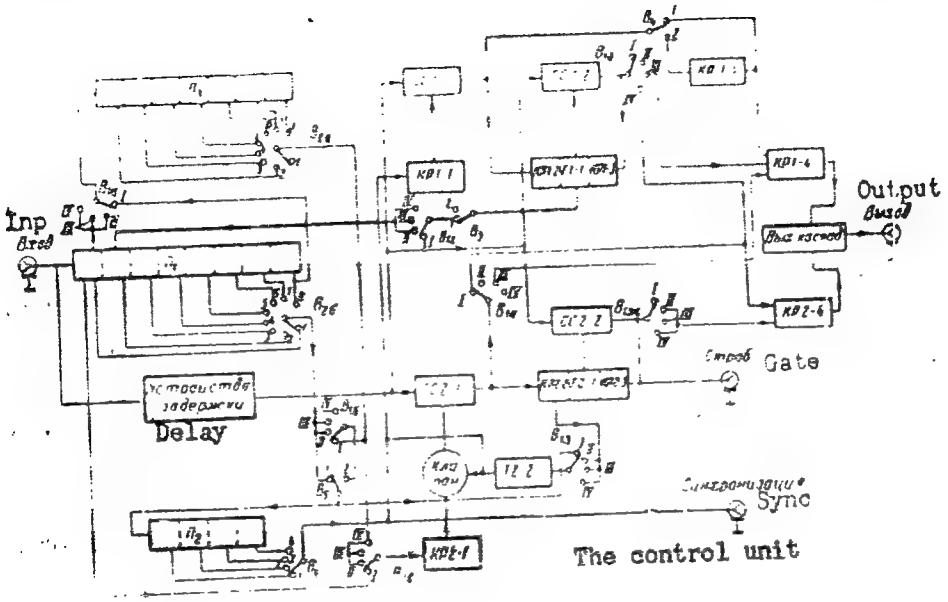
ASSOCIATION: [illegible]

SUBMITTED: [illegible]

L 25392-65

ENCLOSURE: 01

ACCESSION NR: AP5002157



Card 1/1

GUSEV, V.M.; TIFLOVA, L.A.; GUSEVA, A.A.; BEDNYY, S.N.

Notes on fleas and ticks in Askaniya-Nova. Trudy Nauch.-issl. protivochum. inst. Kav. i Zakav. no.5:268-275 '61.
(MIRA 17:1)

TIFLISSKIY, L.P. (Moskva)

In the world of radioactive isotopes. Priroda 50 no.8:117 Ag '61. (MIRA 14:7)

(Radioisotopes)

IOFF, I.G.; GERSHKOVICH, N.L.; ZAGNIBORODOVA, Ye.N.; LABUNETS, N.F.; LEBEDEV, A.D.; MIKULIN, M.A.; SKALON, O.I.; TIFLOV, V.Ye.; SHVARTS, Ye.A.; YURKINA, V.I.; YAGUBYANTS, I.M.

New species of fleas (Suctoria-Aphaniptera); third report. Med.paraz.i paraz.bol. no.5:460-465 S-O '53. (MLRA 6:12) (Fleas)

NIKOLAYEV, N.I., otv. red.; LENSKAYA, G.N., zam. otv. red.; PASTUKHOV, B.N., zam. otv. red.; FENYUK, B.K., zam. otv. red.; ISHUNINA, T.I., red.; AKIYEV, A.K., red.; DOMARADSKIY, I.V., red.; DROZHEVKINA, M.S., red.; ZHOVTYY, I.F., red.; KOROBKOVA, Ye.I., red.; KRAMINSKIY, V.A., red.; KRATINOV, A.G., red.; LEVI, M.I., red.; LOBANOV, V.N., red.; MIRONOV, N.P., red.; PETROV, V.S., red.; PLANKINA, Z.A., red.; PYPINA, I.M., red.; SMIRNOV, S.M., red.; TER-VARTANOV, V.N., red.; TIFLOV, V.Ye., red.; FEDOROV, V.N., red.; PARNES, Ya.A., red.; PRONINA, N.D., tekhn. red.

[Especially dangerous natural focus infections] Osobo opasnye i prirodnoochagovye infektsii; sbornik nauchnykh rabot protivochumnykh uchrezhdenii. Moskva, Medgiz, 1962. 271 p.
(MIRA 16:5)

(COMMUNICABLE DISEASES)

TIFLOV, V.Ye.; DAVYDOV, G.S.

Fleas of some rodents in southwestern Tajikistan.
Trudy Inst. zool. i paraz. AN Tadzh. SSR 22:70-75
'62. (MIRA 15:11)
(Tajikistan—Rodentia)
(Water metabolism)

TIFLOV, V.Ye.

Fate of bacterial cultures in the organism of fleas. Mat. k pozn. fauny i flory SSSR. Otd. zool. no.39:181-198 '64.
(MIRA 17:6)

IOFF, I.G. [deceased]; TIFLOV, V.Ye.; FEDINA, O.A. [deceased]

List of flea species (Suctoria) in Stavropol Territory. Mat. k pozn. fauny i flory SSSR. Otd. zool. no.39:24-30 '64.
(MIRA 17:6)

TIFLOV, V.Ye.; GUBINA, N.Ye.

New flea conserving liquid for plague tests; preliminary report. Mat. k pozn. fauny i flory SSSR. Otd. zool. no.39:199-204 '64. (MIRA 17:6)

TIFLOV, V.Ye.

Bibliography on fleas of the U.S.S.R. Trudy Nauch.-issl. protivochum. inst. Kav. i Zakav. no.5:305-328 '61.
(MIRA 17:1)